



# BioMap and Living Waters

## Guiding Land Conservation for Biodiversity in Massachusetts

### Core Habitats of Chatham

This report and associated map provide information about important sites for biodiversity conservation in your area.

This information is intended for conservation planning, and is not intended for use in state regulations.

Produced by:  
**Natural Heritage & Endangered Species Program**  
**Massachusetts Division of Fisheries and Wildlife**  
**Executive Office of Environmental Affairs**  
**Commonwealth of Massachusetts**

Produced in 2004



# BioMap and Living Waters:

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\* Depending on the location of Core Habitats, your city or town may not have all of these sections.

**Spring Salamander**  
(*Gyrinophilus porphyriticus*)  
Species of Special Concern



*Funding for this project was made available by the Executive Office of Environmental Affairs, contributions to the Natural Heritage & Endangered Species Fund, and through the State Wildlife Grants Program of the US Fish & Wildlife Service.*



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### Introduction

In this report, the Natural Heritage & Endangered Species Program provides you with site-specific biodiversity information for your area. Protecting our biodiversity today will help ensure the full variety of species and natural communities that comprise our native flora and fauna will persist for generations to come.

The information in this report is the result of two statewide biodiversity conservation planning projects, **BioMap** and **Living Waters**. The goal of the BioMap project, completed in 2001, was to identify and delineate the most important areas for the long-term viability of terrestrial, wetland, and estuarine elements of biodiversity in Massachusetts. The goal of the Living Waters project, completed in 2003, was to identify and delineate the rivers, streams, lakes, and ponds that are important for freshwater biodiversity in the Commonwealth. These two conservation plans are based on documented observations of rare species, natural communities, and exemplary habitats.

### What is a Core Habitat?

Both BioMap and Living Waters delineate **Core Habitats** that identify the most critical sites for biodiversity conservation across the state. Core Habitats represent habitat for the state's most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats. Core Habitats represent a wide diversity of rare species and natural communities (see Table 1), and these areas are also thought to contain virtually all of the other described species in Massachusetts. Statewide, BioMap Core Habitats encompass 1,380,000 acres of uplands and wetlands, and Living Waters identifies 429 Core Habitats in rivers, streams, lakes, and ponds.



### Core Habitats and Land Conservation

One of the most effective ways to protect biodiversity for future generations is to protect Core Habitats from adverse human impacts through land conservation. For Living Waters Core Habitats, protection efforts should focus on the **riparian areas**, the areas of land adjacent to water bodies. A naturally vegetated buffer that extends 330 feet (100 meters) from the water's edge helps to maintain cooler water temperature and to maintain the nutrients, energy, and natural flow of water needed by freshwater species.

### In Support of Core Habitats

To further ensure the protection of Core Habitats and Massachusetts' biodiversity in the long-term, the BioMap and Living Waters projects identify two additional areas that help support Core Habitats.

In BioMap, areas shown as **Supporting Natural Landscape** provide buffers around the Core Habitats, connectivity between Core Habitats, sufficient space for ecosystems to function, and contiguous undeveloped habitat for common species. Supporting Natural Landscape was



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generated using a Geographic Information Systems (GIS) model, and its exact boundaries are less important than the general areas that it identifies. Supporting Natural Landscape represents potential land protection priorities once Core Habitat protection has been addressed.

In Living Waters, *Critical Supporting Watersheds* highlight the immediate portion of the watershed that sustains, or possibly degrades, each freshwater Core Habitat. These areas were also identified using a GIS model. Critical Supporting Watersheds represent developed and undeveloped lands, and can be quite large. Critical Supporting Watersheds can be helpful in land-use planning, and while they are not shown on these maps, they can be viewed in the Living Waters report or downloaded from [www.mass.gov/mgis](http://www.mass.gov/mgis).

## Understanding Core Habitat Species, Community, and Habitat Lists

### What's in the List?

Included in this report is a list of the species, natural communities, and/or aquatic habitats for each Core Habitat in your city or town. The lists are organized by Core Habitat number.

For the larger Core Habitats that span more than one town, the species and community lists refer to the entire Core Habitat, not just the portion that falls within your city or town. For a list of all the state-listed rare species within your city or town's boundary, whether or not they are in Core Habitat, please see the town rare species lists available at [www.nhesp.org](http://www.nhesp.org).

The list of species and communities within a Core Habitat contains only the species and

**Table 1.** The number of rare species and types of natural communities explicitly included in the BioMap and Living Waters conservation plans, relative to the total number of native species statewide.

BioMap		
Biodiversity Group	Species and Verified Natural Community Types	
	Included in BioMap	Total Statewide
Vascular Plants	246	1,538
Birds	21	221 breeding species
Reptiles	11	25
Amphibians	6	21
Mammals	4	85
Moths and Butterflies	52	An estimated 2,500 to 3,000
Damselflies and Dragonflies	25	An estimated 165
Beetles	10	An estimated 2,500 to 4,000
Natural Communities	92	> 105 community types
Living Waters		
Biodiversity Group	Species	
	Included in Living Waters	Total Statewide
Aquatic Vascular Plants	23	114
Fishes	11	57
Mussels	7	12
Aquatic Invertebrates	23	An estimated > 2500

natural communities that were explicitly included in a given BioMap or Living Waters Core Habitat. Other rare species or examples of other natural communities may fall within the Core Habitat, but for various reasons are not included in the list. For instance, there are a few rare species that are omitted from the list or summary because of their particular sensitivity to the threat of collection. Likewise, the content of many very small Core Habitats are not described in this report or list, often because they contain a single location of a rare plant



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species. Some Core Habitats were created for suites of common species, such as forest birds, which are particularly threatened by habitat fragmentation. In these cases, the individual common species are not listed.

### What does 'Status' mean?

The Division of Fisheries and Wildlife determines a status category for each rare species listed under the Massachusetts Endangered Species Act, M.G.L. c.131A, and its implementing regulations, 321 CMR 10.00. Rare species are categorized as Endangered, Threatened, or of Special Concern according to the following:

- **Endangered** species are in danger of extinction throughout all or a significant portion of their range or are in danger of extirpation from Massachusetts.
- **Threatened** species are likely to become Endangered in Massachusetts in the foreseeable future throughout all or a significant portion of their range.
- **Special Concern** species have suffered a decline that could threaten the species if allowed to continue unchecked or occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become Threatened in Massachusetts.

In addition, the Natural Heritage & Endangered Species Program maintains an unofficial **watch list** of plants that are tracked due to potential conservation interest or concern, but are not regulated under the Massachusetts Endangered Species Act or other laws or regulations. Likewise, described natural communities are not regulated any laws or regulations, but they can help to identify ecologically important areas that are worthy of protection. The status of natural

### Legal Protection of Biodiversity

BioMap and Living Waters present a powerful vision of what Massachusetts would look like with full protection of the land that supports most of our biodiversity. To create this vision, some populations of state-listed rare species were deemed more likely to survive over the long-term than others.

Regardless of their potential viability, all sites of state-listed species have full legal protection under the Massachusetts Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00). Habitat of state-listed wildlife is also protected under the Wetlands Protection Act Regulations (310 CMR 10.37 and 10.59). The **Massachusetts Natural Heritage Atlas** shows **Priority Habitats**, which are used for regulation under the Massachusetts Endangered Species Act and Massachusetts Environmental Policy Act (M.G.L. c.30) and **Estimated Habitats**, which are used for regulation of rare wildlife habitat under the Wetlands Protection Act. For more information on rare species regulations, see the *Massachusetts Natural Heritage Atlas*, available from the Natural Heritage & Endangered Species Program in book and CD formats.

BioMap and Living Waters are conservation planning tools and do not, in any way, supplant the Estimated and Priority Habitat Maps which have regulatory significance. Unless and until the combined BioMap and Living Waters vision is fully realized, we must continue to protect all populations of our state-listed species and their habitats through environmental regulation.

communities reflects the documented number and acreages of each community type in the state:

- **Critically Imperiled** communities typically have 5 or fewer documented sites or have very few remaining acres in the state.
- **Imperiled** communities typically have 6-20 sites or few remaining acres in the state.
- **Vulnerable** communities typically have 21-100 sites or limited acreage across the state.
- **Secure** communities typically have over 100 sites or abundant acreage across the state; however excellent examples are identified as Core Habitat to ensure continued protection.



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### Understanding Core Habitat Summaries

Following the BioMap and Living Waters Core Habitat species and community lists, there is a descriptive summary of each Core Habitat that occurs in your city or town. This summary highlights some of the outstanding characteristics of each Core Habitat, and will help you learn more about your city or town's biodiversity. You can find out more information about many of these species and natural communities by looking at specific *fact sheets* at [www.nhesp.org](http://www.nhesp.org).

### Next Steps

BioMap and Living Waters were created in part to help cities and towns prioritize their land protection efforts. While there are many reasons to conserve land – drinking water protection, recreation, agriculture, aesthetics, and others – BioMap and Living Waters Core Habitats are especially helpful to municipalities seeking to protect the rare species, natural communities, and overall biodiversity within their boundaries. Please use this report and map along with the rare species and community fact sheets to appreciate and understand the biological treasures in your city or town.

### Protecting Larger Core Habitats

Core Habitats vary considerably in size. For example, the average BioMap Core Habitat is 800 acres, but Core Habitats can range from less than 10 acres to greater than 100,000 acres. These larger areas reflect the amount of land needed by some animal species for breeding, feeding, nesting, overwintering, and long-term survival. Protecting areas of this size can be

very challenging, and requires developing partnerships with neighboring towns.

Prioritizing the protection of certain areas within larger Core Habitats can be accomplished through further consultation with Natural Heritage Program biologists, and through additional field research to identify the most important areas of the Core Habitat.

### Additional Information

If you have any questions about this report, or if you need help protecting land for biodiversity in your community, the Natural Heritage & Endangered Species Program staff looks forward to working with you.

Contact the Natural Heritage & Endangered Species Program:

*by Phone* 508-792-7270, Ext. 200

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*by Email:* [natural.heritage@state.ma.us](mailto:natural.heritage@state.ma.us).

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The GIS datalayers of BioMap and Living Waters Core Habitats are available for download from MassGIS: [www.mass.gov/mgis](http://www.mass.gov/mgis)

Check out [www.nhesp.org](http://www.nhesp.org) for information on:

- Rare species in your town
- Rare species fact sheets
- BioMap and Living Waters projects
- Natural Heritage publications, including:
  - \* Field guides
  - \* Natural Heritage Atlas, and more!



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# BioMap: Species and Natural Communities

## Chatham

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### Core Habitat BM1241

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Estuarine Intertidal: Saline/Brackish Flats		Vulnerable
Marine Intertidal: Flats		Secure
Maritime Beach Strand Community		Vulnerable
Maritime Dune Community		Imperiled

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
American Sea-Blite	<i>Suaeda calceoliformis</i>	Special Concern
Oysterleaf	<i>Mertensia maritima</i>	Endangered

#### Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Coastal Heathland Cutworm	<i>Abagrotis nefascia benjamini</i>	Special Concern

#### Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Arctic Tern	<i>Sterna paradisaea</i>	Special Concern
Common Moorhen	<i>Gallinula chloropus</i>	Special Concern
Common Tern	<i>Sterna hirundo</i>	Special Concern
Diamondback Terrapin	<i>Malaclemys terrapin</i>	Threatened
Least Tern	<i>Sterna antillarum</i>	Special Concern
Northern Harrier	<i>Circus cyaneus</i>	Threatened
Pied-Billed Grebe	<i>Podilymbus podiceps</i>	Endangered
Piping Plover	<i>Charadrius melodus</i>	Threatened
Roseate Tern	<i>Sterna dougallii</i>	Endangered
Short-eared Owl	<i>Asio flammeus</i>	Endangered



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# BioMap: Species and Natural Communities

## Chatham

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### Core Habitat BM1311

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Plymouth Gentian	<i>Sabatia kennedyana</i>	Special Concern
Redroot	<i>Lachnanthes carolina</i>	Special Concern

#### Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
New England Bluet	<i>Enallagma laterale</i>	Special Concern
Pine Barrens Bluet	<i>Enallagma recurvatum</i>	Threatened

### Core Habitat BM1323

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Coastal Plain Pondshore		Imperiled

### Core Habitat BM1325

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Coastal Plain Pondshore		Imperiled

### Core Habitat BM1326

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Coastal Plain Pondshore		Imperiled

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Plymouth Gentian	<i>Sabatia kennedyana</i>	Special Concern
Pondshore Knotweed	<i>Polygonum puritanorum</i>	Special Concern



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# BioMap: Species and Natural Communities

## Chatham

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### Core Habitat BM1327

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Coastal Plain Pondshore		Imperiled

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Maryland Meadow Beauty	<i>Rhexia mariana</i>	Endangered
Plymouth Gentian	<i>Sabatia kennedyana</i>	Special Concern

#### Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
New England Bluet	<i>Enallagma laterale</i>	Special Concern

### Core Habitat BM1329

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

### Core Habitat BM1330

#### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

### Core Habitat BM1333

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Sensitive Natural Community		



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# BioMap: Species and Natural Communities

## Chatham

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### Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

### Core Habitat BM1356

#### Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Least Tern	<i>Sterna antillarum</i>	Special Concern
Piping Plover	<i>Charadrius melodus</i>	Threatened

### Core Habitat BM1358

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Marine Intertidal: Flats		Secure

### Core Habitat BM1365

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Marine Intertidal: Flats		Secure

### Core Habitat BM1366

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Marine Intertidal: Flats		Secure

### Core Habitat BM1367

#### Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Marine Intertidal: Flats		Secure



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# BioMap: Species and Natural Communities

## Chatham

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### Core Habitat BM1369

#### Natural Communities

Common Name

Scientific Name

Status

Marine Intertidal: Flats

Secure



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# BioMap: Core Habitat Summaries

## Chatham

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### Core Habitat BM1241

South Beach and South Monomoy Islands provide the most important breeding sites in the state for Piping Plovers, and South Monomoy Island also supports the state's largest Common Tern, Laughing Gull, Herring Gull, and Great Black-backed Gull colonies. The beaches and extensive sandflats and mudflats at North and South Monomoy Islands and South Beach Island collectively represent one of the most important shorebird migration stopover areas in New England. In addition, this Core Habitat encompasses large, high-quality natural communities, including Estuarine Intertidal Flats, Maritime Beach Strands, and Maritime Dune systems. These areas provide significant habitat for several rare moth species, two rare plant species, as well as Diamondback Terrapins. The Core Habitat encompasses Nauset Beach, South Beach, North and South Monomoy Islands, Sampson Island, Hog Island, Tern Island, Strong Island, Sipson Meadow, Sipson Island, Little Sipson Island, Pleasant Bay, Little Pleasant Bay (and associated inlets), and Chatham Harbor. Given their constantly changing configurations, the current extents of the beaches, especially South Beach Island, may not be reflected precisely in the Core Habitat.

#### Natural Communities

This long Core Habitat includes an exemplary barrier beach system. It includes five miles of good-quality Maritime Beach Strand with minimal disturbances located on the ocean side of a high-quality 2000-acre Maritime Dune system with natural vegetation, limited access, and no vehicle damage. Maritime Beach Strand communities are sparsely vegetated, narrow, wrack-strewn areas between the line of high tide and the foredunes. They are usually part of barrier beach systems and are found seaward of any dunes, but above daily high tides. Meanwhile, the Maritime Dune community consists of patches of herbaceous plants interspersed with areas of bare sand and shrubs. It occurs on windswept dunes within the salt spray zone, and often grades into shrubland or woodlands on more sheltered back dunes. Also included in this Core Habitat are the Estuarine Intertidal Saline/Brackish Flats along the shores of Monomoy Island. These flats are well-buffered within a complex of estuarine communities and are a rich area for migratory shorebirds and horseshoe crabs.

#### Plants

Two rare sea-beach plants, American Sea-Blite and Oysterleaf, are found within beach strand communities along the shores of Monomoy Island.

#### Invertebrates

This Core Habitat includes Monomoy Island (part of the Monomoy National Wildlife Refuge), which is protected coastal sandplain habitat for rare moths such as the Coastal Heathland Cutworm. It is likely that Monomoy Island is inhabited by additional rare coastal moth species, such as the Dune Noctuid moth, the Drunk Apamea moth, and other species.



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# BioMap: Core Habitat Summaries

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### Vertebrates

Barrier beaches and islands within this Core Habitat support several species of breeding coastal waterbirds and raptors, including: Piping Plovers, Least Terns, Common Terns, Roseate Terns, Black-crowned Night-Herons, Glossy Ibises, Snowy Egrets, Laughing Gulls, Herring Gulls, Great Black-backed Gulls, and, in some years, Black Skimmers, Arctic Terns, Short-eared Owls, and Northern Harriers. South Beach and South Monomoy Islands are notable as two of the most important breeding sites in the state for the Piping Plover. South Monomoy Island also supports the state's largest Common Tern, Laughing Gull, Herring Gull, and Great Black-backed Gull colonies, and is among the most important breeding sites for Black-crowned Night-Herons and Snowy Egrets. Potential threats to these coastal waterbird and raptor species include predation, human disturbance (including dogs), off-road vehicles, and habitat degradation caused by dune-building activities. Annual protection from these threats is needed.

The beaches and extensive sandflats and mudflats at North and South Monomoy Islands as well as South Beach Island collectively represent one of the most important shorebird migration stopover areas in New England. Uncommon species of marsh birds and waterfowl, including Pied-billed Grebe, Common Moorhen, and Gadwall, occasionally nest in wetlands on South Monomoy Island.

This Core Habitat also contains salt marsh, tidal creeks, beaches, dune areas, shallow waters, and sandy uplands that support Diamondback Terrapins. Thirty documented observations of nesting are known from the late 1970s and early 1980s. The land along the upper reaches of the bay is relatively undeveloped, but in areas of development, potential threats to this species include mortality caused by vehicles and degradation of foraging and nesting habitat.

### Core Habitat BM1311

#### Plants

Redroot, an unusual plant of the Coastal Plain, is found in one area of this Core Habitat. In addition, a population of the beautiful and globally rare Plymouth Gentian is growing within this area.

#### Invertebrates

This Core Habitat includes two Coastal Plain ponds that are habitat for both the Pine Barrens Bluet damselfly and the New England Bluet damselfly. Although surrounded by development, this Core Habitat is located less than 5 km from other populations of these damselflies at White Pond and vicinity in Chatham and at Hawksnest Pond and vicinity in Harwich, which allows for occasional dispersal of damselflies between these locations. It appears that none of this Core Habitat is on protected land.



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# BioMap: Core Habitat Summaries

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### Core Habitat BM1323

#### Natural Communities

The Coastal Plain Pondshore community in this Core Habitat is at a small pondlet next to a larger pond, and is part of a cluster of ponds in a mostly developed area. Coastal Plain Pondshores are globally rare herbaceous communities of exposed pondshores with a distinct Coastal Plain flora. Water levels change with the water table, typically leaving an exposed shoreline in late summer where many rare species grow. This pondlet has some natural vegetation around it, and small amounts of mostly natural vegetation around most of the ponds in the cluster help protect the shorelines. The pond in this Core Habitat and most of the ponds in the several clusters are within the zone of groundwater contribution of a public water supply well and are subject to lowering of the water table as a result. Each pond has been impacted by development, but because the ponds are clustered, each pond can contribute to maintaining the overall biodiversity of the ponds of the area.

### Core Habitat BM1325

#### Natural Communities

The Coastal Plain Pondshore community in this Core Habitat is part of a cluster of ponds in a mostly developed area. Coastal Plain Pondshores are globally rare herbaceous communities of exposed pondshores with a distinct Coastal Plain flora. Water levels change with the water table, typically leaving an exposed shoreline in late summer where many rare species grow. Here there is some natural vegetation around the pond; small amounts of mostly natural vegetation occur around most of the ponds in the cluster, helping to protect the shorelines. The pond in this Core Habitat and most of the ponds in the several clusters nearby are within the area of groundwater contribution to a public water supply well and are subject to lowering of the water table as a result. Each pond in the cluster contributes habitat for rare and more common species characteristic of Coastal Plain Ponds; together the ponds can each contribute to maintaining the overall biodiversity of the ponds of the area.

### Core Habitat BM1326

#### Natural Communities

The Coastal Plain Pondshore community in this Core Habitat is part of a cluster of ponds in a mostly developed area. Coastal Plain Pondshores are globally rare herbaceous communities of exposed pondshores with a distinct Coastal Plain flora. Water levels change with the water table, typically leaving an exposed shoreline in late summer where many rare species grow. Here small amounts of mostly natural vegetation occur around most of the ponds in the cluster, helping to protect the shorelines. The pond in this Core Habitat and most of the ponds in the several clusters nearby are within the zones of groundwater contribution to several public water supply wells and are subject to lowering of the water table as a result. Each pond in the cluster contributes habitat for rare and more common species characteristic of Coastal Plain Ponds; together they can all contribute to maintaining the overall biodiversity of the ponds of the area.



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*For more information on rare species and natural communities, please see our fact sheets online at [www.nhesp.org](http://www.nhesp.org)*

# BioMap: Core Habitat Summaries

## Chatham

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### Plants

A population of the beautiful and globally rare Plymouth Gentian is found within this Core Habitat.

### Core Habitat BM1327

#### Natural Communities

The Coastal Plain Pondshore communities in this Core Habitat make up a cluster of ponds in a mostly developed area but not too far from another cluster of ponds. Coastal Plain Pondshores are globally rare herbaceous communities of exposed pondshores with a distinct Coastal Plain flora. Water levels change with the water table, typically leaving an exposed shoreline in late summer where many rare species grow. Most of the ponds here have at least narrow bands of natural vegetation around them, helping to protect the shorelines. The pond in this Core Habitat and all the ponds in the cluster are within the zones of groundwater contribution to several public water supply wells and are subject to lowering of the water table as a result. Each pond in the cluster contributes habitat for rare and more common species characteristic of Coastal Plain Ponds; together they can all contribute to maintaining the overall biodiversity of the ponds of the area.

### Plants

Two of our most showy rare plants, the globally rare Plymouth Gentian and the Endangered Maryland Meadow Beauty, are found within this Core Habitat.

### Invertebrates

This Core Habitat includes a complex of Coastal Plain ponds (Bear, Black, Blue, White, Emery, and Perch Ponds), all of which are habitat for the rare New England Bluet damselfly. Although surrounded by development, this Core Habitat is located less than 5 km from populations of the New England Bluet at Core Habitat in Chatham and at Hawksnest Pond and vicinity in Harwich, which allows for occasional dispersal of damselflies between these areas. Apparently only a very small fraction of this Core Habitat is on protected land.

### Core Habitat BM1356

#### Vertebrates

Harding Beach supports breeding Piping Plovers and Least Terns. Potential threats to nesting coastal waterbirds include habitat alteration and loss, human disturbance (including dogs), and predation. Annual protection from these threats is needed.



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# BioMap: Core Habitat Summaries

## Chatham

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### Core Habitat BM1358

#### Natural Communities

This Core Habitat is part of a complex that contains excellent-quality and well-protected Marine Intertidal Flats. The Marine Intertidal Flat community is found in areas protected from intense wave action. Although many flats have little to no vegetation, they are physically and biologically linked to other coastal marine systems. The flats here support a good diversity of invertebrates and are a very important foraging area for shorebirds.

### Core Habitat BM1365

#### Natural Communities

This Core Habitat is part of a complex that contains excellent-quality and well-protected Marine Intertidal Flats. The Marine Intertidal Flat community is found in areas protected from intense wave action. Although many flats have little to no vegetation, they are physically and biologically linked to other coastal marine systems. The flats here support a good diversity of invertebrates and are a very important foraging area for shorebirds.

### Core Habitat BM1366

#### Natural Communities

This Core Habitat is part of a complex that contains excellent-quality and well-protected Marine Intertidal Flats. The Marine Intertidal Flat community is found in areas protected from intense wave action. Although many flats have little to no vegetation, they are physically and biologically linked to other coastal marine systems. The flats here support a good diversity of invertebrates and are a very important foraging area for shorebirds.

### Core Habitat BM1367

#### Natural Communities

This Core Habitat is part of a complex that contains excellent-quality and well-protected Marine Intertidal Flats. The Marine Intertidal Flat community is found in areas protected from intense wave action. Although many flats have little to no vegetation, they are physically and biologically linked to other coastal marine systems. The flats here support a good diversity of invertebrates and are a very important foraging area for shorebirds.



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# BioMap: Core Habitat Summaries

## Chatham

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### Core Habitat BM1369

#### Natural Communities

This Core Habitat is part of a complex that contains excellent-quality and well-protected Marine Intertidal Flats. The Marine Intertidal Flat community is found in areas protected from intense wave action. Although many flats have little to no vegetation, they are physically and biologically linked to other coastal marine systems. The flats here support a good diversity of invertebrates and are a very important foraging area for shorebirds.



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